AMENDED CLAIMS

54

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- 1. A porcine reproductive and respiratory syndrome virus (PRRSV) replicon having at least some of its original PRRSV nucleic acid deleted, said replicon comprising essential elements from the PRRSV polymerase region and capable of in vivo RNA replication.
- 2. A porcine reproductive and respiratory syndrome virus (PRRSV) replicon capable of *in vivo* RNA replication further comprising nucleic acid derived from at least one heterologous micro-organism.
- 3. A replicon according to claim 1 further comprising nucleic acid derived from at least one heterologous micro-organism.
- 4. A replicon according to anyone of claims 1 to 3 wherein said replicon comprises RNA.
- 5. A replicon according to anyone of claims 1 to 4 at least comprising essential sequence elements from the 5' noncoding region-ORF1a-ORF1b-ORF7-3'noncoding region of PRRSV.
- 6. A replicon according to anyone of claims 1 to 5 comprising at least nucleic acid corresponding to a region between nucleotides 14643 to 14687 in the ORF7 region of PRRSV.
- 7. A replicon according to anyone of claims 1 to 6 comprising nucleic acid substitutions or deletions in the ORF7 gene encoding the N protein rendering it incapable of N-protein capsid formation.
- 8. A replicon according to claim 7 comprising a nucleic acid modification deleting a cysteine in the N-protein at position 27 and/or 76.
- 9. A replicon according to claim 7 comprising a nucleic acid modification leading to an amino acid change of the B-region comprising amino acids 25-30 and/or the D-region comprising amino

acids 51-67 and/or amino acids 80-90 of the N-protein.

- 10. A replicon according to anyone of claims 1 to 9 wherein a marker allowing serological discrimination has been introduced.
- 11. A replicon according to claim 10 comprising a nucleic acid modification leading to an amino acid change of the original asparagine residue at position 62 of the N-protein.
- 12. A replicon according to claim 10 comprising a nucleic acid modification

leading to an amino acid change in ORF 2, 3, 4, 5 and/or 6.

- 13. A replicon according to anyone of claims 1-12 comprising a nucleic acid modification in a virulence marker of PRRSV.
- 14. A replicon according to claim 13 comprising a nucleic acid modification in ORF 6 encoding the membrane spanning M-protein.
- 15. A replicon according to claim 14 wherein said modification modifies protein M in between its second and third membrane spanning fragment.
- 16. A replicon according to anyone of claims 2-15 wherein said heterologous micro-organism comprises a pathogen.
- 17. A replicon according to claim 16 wherein said pathogen is a virus.
- 18. Use of a replicon according to anyone of claims 1-17 for obtaining a vaccine.
- 19. Use according to claim 18 wherein said vaccine is a non-spreading vaccine.
- 20. Use according to claim 18 or 19 wherein said vaccine is a marker vaccine.
- 21. A vaccine comprising a replicon according to anyone of claims 1-17.
- 22. Use of a vaccine according to claim 21 for vaccinating pigs.